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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,724	06/29/2001	Hajime Izawa	SUMI-005	8532

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EXAMINER

YOON, TAE H

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/269,724

Applicant(s)

Izawa et al.

Examiner

T. Yoon

Group Art Unit

1714

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-5 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-5 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☒ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
- ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited properties are indefinite in not specifying a particular film thickness since said properties are dependent on said film thickness. For example, the thinner the film, the lower haze value.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) 1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a); or

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The examiner's position is that even a small amount, such as 0.01 wt.%, of a conductive oxide powder having a diameter of no greater than 100 nm would meet the instant invention absent a particular amount thereof. Also, the prior art teaching an average particle size of 30 nm, for example, would encompass particles having a size of 10 nm and 40 nm inherently since said average particle size includes various sizes, smaller or larger.

Claims 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yukinobu et al (US 5,411,792).

Yukinobu et al teach a transparent conductive substrate having the instant mesh-shaped openings (fig. 3 and screen printing at col. 6, lines 15-22) and a light transmittance, a haze value and a surface resistivity (tables 2 and 6). Said transparent conductive substrate comprises a resin and ITO particle having a particle size of 0.03 μm (30 nm) (table 1 and col. 6, lines 15-22). Solvents would be absent in said transparent conductive substrate. Also, an invention in a product-by-process claim is a product, not a process. See *In re Brown*, 459 F2d 531, 173 USPQ 685 (CCPA 1972) and *In re Thorpe*, 777 F2d 695, 697, 227 USPQ 964 (Fed. Cir. 1985).

Thus, the instant invention lacks novelty.

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Claims 1-5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yukinobu et al (US 6,261,479).

Yukinobu et al teach the instant transparent conductive film of claim 5 in comparative example 2 and table 1. Also, examples 5, 6 and 11 of said table 1 meet the instant claim 4. Said film inherently possesses mesh-shaped openings since the composition of said film of Yukinobu et al is same as in the instant invention, a resin and ITO particle having a particle size of 0.03 μm (30 nm). Example 5 teaches the use of colloidal dispersion of example 1 wherein the use of ethanol and diacetone alcohol (col. 14, line 5) which meet the instant solvent is taught. Conductive fine oxide particles having a particle size of 1 nm to 100 nm which encompass the instant particles of claim 3 are taught at col. 7, lines 39-41.

Thus, the instant invention lacks novelty.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sato et al (US 5,204,177).

Sato et al teach the instant transparent conductive coating composition and a film thereof in example 15, col. 9, lines 59-61 and table 2. Thus, the instant invention lacks novelty.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Murouchi et al (US 5,504,133).

Murouchi et al teach the transparent conductive coating composition comprising a polymer, ITO particles having a particle size of 0.05 μm (50 nm) and a film thereof in abstract and

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table 1 and at col. 3, lines 10-29 and col. 8, lines 53-55. The instant solvents are taught at col. 3, lines 30-42. Thus, the instant invention lacks novelty.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nishihara et al (US 5,518,810).

Nishihara et al teach the instant transparent conductive coating composition and a film thereof in example 5 wherein the use of tetrahydrofuran and dimethylformamide is seen. The instant light transmissivity, ITO particle size and surface resistivity are taught at col. 9, lines 38-64 which inherently yields the instant haze value. Thus, the instant invention lacks novelty.

Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tamai et al (US 2002/0051879).

Tamai et al teach the instant transparent conductive coating composition and a film thereof in [0077] and table 1 wherein the use of mixed solvents is seen. Films having low haze values in table 1 inherently meet the instant light transmissivity. ATO particles having an average particle size of 20 nm ([0074]) also encompass particles having a size of below 10 nm. Other metal oxides [0034], and an average particle size of 5 to 50 nm [0035] which meets the invention are taught. Various solvents and combination thereof are taught at [0050]-[0051]. Thus, the instant invention lacks novelty.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Monday to Thursday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

THY/June 12, 2003



**TAE H. YOON
PRIMARY EXAMINER**